

Alamo Roman and Portland Cement Company
(San Antonio Portland Cement Company)
Brackenridge Park
San Antonio
Bexar County
Texas

HABS No. TX-3173

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Historic American Buildings Survey
National Park Service
Department of the Interior
Washington, D.C. 20240

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HISTORIC AMERICAN BUILDINGS SURVEY

ALAMO ROMAN AND PORTLAND CEMENT COMPANY
(San Antonio Portland Cement Company)

HABS No. TX-3173

Location: Brackenridge Park, San Antonio, Bexar County, Texas.

Present Owner: City of San Antonio.

Present Use: The former factory is now incorporated into a city park and is used as an attraction for the park visitors.

Significance: Organized on January 15, 1880, the Alamo Roman and Portland Cement Company claims to be the first manufacturing establishment to produce true Portland cement west of the Mississippi River. The manufacturing plant was established at this site and, from the cement rock taken from the adjacent quarry, began producing cement in 1880 at the rate of ten barrels a day. Although local acceptance of this new building material was slow to develop, the company continued to expand and in 1897, after being reincorporated as the San Antonio Portland Cement Company, introduced an advanced manufacturing process: a rotary kiln using powdered coal as fuel. In 1908 a new site was selected and a new plant erected thereon which is today one of the Southwest's largest producers of Portland cement. Although the original frame factory buildings are not extant, the ruins of the three kilns that remain are significant objects in the history of building technology in the Southwest.

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: Circa 1880.

B. Historical Context: The development of manufacturing Portland cement as a commercial enterprise began in Texas in 1879 when a visiting Englishman, William Loyd, accidentally discovered a source of natural cement rock in an old San Antonio quarry. Loyd, on a casual hunting expedition, happened to come upon the old quarry, some two and a half miles north of town and upon investigation was intrigued with the casual resemblance of the stone to that which he had observed in English cement rock quarries.

Loyd obtained samples of the quarry stone and proceeded to San Antonio to have the specimens analyzed. There he sought out the young German chemist George H. Kalteyer, a junior partner at the time in his father's drugstore,

F. Kalteyer and Son. George Kalteyer was well qualified to examine Loyd's specimens, as he had previously studied chemistry in Germany under a Dr. Friesenius of Wiesbaden during the late 1860s. At that time Friesenius was engaged in a study of natural cements for the German Government and Kalteyer served as an assistant.

Loyd's samples proved to be blue argillaceous limestone, a natural cement rock which contained the correct proportions of lime to clay required to produce true Portland cement. Sample burns of the specimens by W. R. Freeman, a local hydraulic engineer, proved that the stone from the old quarry was indeed suited for the manufacture of Portland cement.

By 1887 the plant had agencies throughout Texas and produced two hundred barrels daily. With forty employees the plant produced Portland and Roman cements, gray and hydraulic lime, and artificial stone. At that time, all of the cement used in the erection of the new State capitol building at Austin was furnished by this plant.

The company's product slowly gained popularity, and by 1889 they were producing fifty barrels a day. Unable to meet the growing demands for their product, the company expanded its operations and began considering the possibility of installing rotary kilns.

Unable to procure fuel oil to operate rotary kilns, this advancement was delayed until 1897. At that time a process for burning powdered coal under boilers was patented in Germany, and George Kalteyer traveled to Europe to investigate its potential. He determined that the process, the DeCamp Patent, was suitable and thereupon acquired the patent rights as well as purchased a coal grinding mill. He never saw the new process in operation, however, as he died in Philadelphia in August of that year.

Charles Baumberger, who began as bookkeeper for the company in 1880, had risen to the position of manager in 1884 and secretary in 1890. Following the death of George Kalteyer in 1897, the company was reincorporated as the San Antonio Portland Cement Company, and Baumberger became president.

Baumberger installed a fifty-foot rotary kiln and the powdered coal system in 1897 and 1898 and successfully burned powdered coal until 1901 when oil became available in San Antonio.

In 1908 a new site was selected for the plant north of the old one and the company moved to that site. The old buildings were abandoned and the lease to the quarries reverted to the City. In later years the quarries were developed by the City into the Japanese Sunken Gardens as one of the features of the present Brackenridge Park. The original stone plant buildings were retained and may still be seen by the park visitor.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural character: This structure is an example of industrial architecture and may provide information concerning the manufacturing processes that were used for the types of cements made in San Antonio.
2. Condition of fabric: In ruins; what remains is in fair condition. The ruins are incorporated as part of a very fine garden which includes the former quarry nearby.

B. Description of Exterior:

1. Overall dimensions: The three-kiln structure measures approximately 19'x 59'. The height of the one remaining kiln is approximately 77'. The layout of the entire structure is rectangular.
2. Walls: Local soft yellowish limestone with a yellow brick lining is found in the lower portions of the stone base structure. Some red brick is used for arches spanning various openings. The stonework is coursed rubble.
3. Structural system, framing: The base structure have timber compression rings which are secured by one-inch diameter tie rods. The rods run diagonally across the corners of the compression rings from centers of adjacent timbers constituting the ring. The rods are iron or steel.
4. Chimney: The chimney is circular in section and steel or cast-iron compression rings encircle the circumference intermittently to serve as reinforcement. Brick buttresses on the lower section give additional strength.
5. Openings: The central doorway at ground level on the south has vertical sides and a stone lintel. The other two at this level have jambs which corbel in to reduce the width of span for the stone lintel. Other openings, in most cases, utilize red brick segmental arches.

C. Site:

1. General setting and orientation: An axis running lengthwise through the overall length of the structure and parallel to the long sides would be about twenty degrees south of west. The elevation called north faces a retaining wall and a higher grade level at the top of this wall. A causeway connects the structure with this higher level. The southern elevation faces a level field. North of the structure is now a sunken garden and several pools, which now occupy the space of the former quarry.

2. Landscaping: There are excellent landscaping and walks and enclosures which are part of the Brackenridge Park. The octagonal pavillion in its relationship to the space of the quarry offers one of the most unusual spatial experiences to be found in the San Antonio region. The central part of the ruin supports a roofed observation platform, which was added as a park attraction.

Prepared by: John C. Garner, Jr.
Director, Bexar County
Architecture Survey
and
Wesley I. Shank
Project Supervisor
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PART III. SOURCES OF INFORMATION

Bibliography:

Anniversary Booklet 1880-1955, San Antonio Portland Cement Company, San Antonio, Texas.

Sidelights of History. Published essay. Author unknown.

PART IV. PROJECT INFORMATION

The San Antonio project was undertaken by the Historic American Buildings Survey (HABS) in the summer of 1968, and was made possible with funds from HABS and two sponsors, the Bexar County Historical Survey Committee and the San Antonio Conservation Society. Under the direction of James Massey, chief of HABS, the project was carried out by Wesley I. Shank (Iowa State University), project supervisor, and by student assistant architects, Charles W. Barrow (University of Texas); Les Beilinson (University of Miami); William H. Edwards (University of Illinois); and Larry D. Hermsen (Iowa State University) at the HABS field office in the former Ursuline Convent buildings, San Antonio. John C. Garner, Jr., director of Bexar County Architecture Survey, did the outside work on the written documentaries. Susan McCown, a HABS staff historian in the Washington, D.C. office, edited the written data in 1983, for preparation of transmittal to the Library of Congress. Dewey G. Mears of Austin, Texas took the documentary photographs of the San Antonio structures.